

Technical Data Sheet

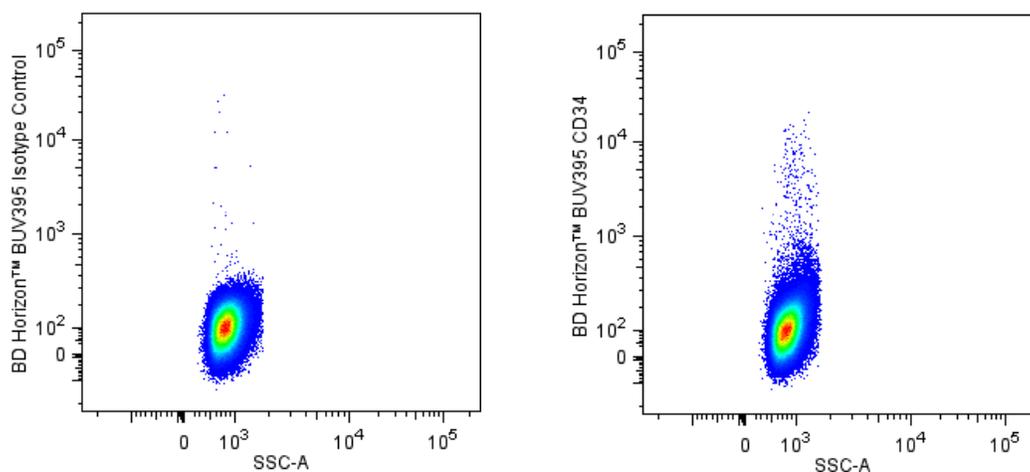
BUV395 Mouse Anti-Human CD34**Product Information**

Material Number:	563778
Alternate Name:	gp105-120; My10; Hematopoietic progenitor cell antigen CD34
Size:	100 Tests
Vol. per Test:	5 µl
Clone:	581
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	V MA27, VI E004
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 581 monoclonal antibody specifically binds to CD34, a sialomucin-like type I transmembrane glycoprotein. This single-chain, 105-120 kDa, heavily O-glycosylated protein is expressed on hematopoietic progenitor cells, vascular endothelium, bone marrow stromal cells and embryonic fibroblasts. The cytoplasmic region of the CD34 antigen is a target for phosphorylation by activated protein kinase C suggesting CD34 may play a role in signal transduction. CD34 may also play a role as an adhesion molecule since it binds to CD62E and CD62L. Clone 581 binds to the class III CD34 epitope. It is resistant to neuraminidase, chymopapain and glycoprotease. The 581 antibody blocks reactivity of another anti-CD34 monoclonal antibody, 8G12.

The antibody was conjugated to BD Horizon BUV395 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. With an Ex Max near 348 nm and an Em Max near 395 nm, BD Horizon BUV395 can be excited by the ultraviolet laser (355 nm) laser and detected with a 379/28 filter. This dye has been exclusively developed by BD Biosciences as an optimal dye for use on instruments equipped with the ultraviolet laser and has virtually no spillover into any other detector.



Two-color flow cytometric analysis of CD34 expression by human peripheral blood mononuclear cells. Human peripheral blood mononuclear cells were stained with APC Mouse Anti-Human CD14 antibody (Cat. No. 555399/561708) and either BD Horizon™ BUV395 Mouse IgG1, Isotype Control (Cat No. 563547, Left Panel) or BD Horizon™ BUV395 Mouse Anti-Human CD34 antibody (Cat. No. 563778, Right Panel). Flow cytometric dot plots showing side-scattered light versus CD34 (or Ig isotype control staining) were derived from gated events based on the light scattering characteristics for CD14-negative cells. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD Horizon BUV395 under optimum conditions, and unconjugated antibody and free BD Horizon BUV395 were removed.

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563778 Rev. 2



Application Notes

Application

Flow cytometry

Routinely Tested

Recommended Assay Procedure:

BD™ CompBeads can be used as surrogates to assess fluorescence spillover (Compensation). When fluorochrome conjugated antibodies are bound to CompBeads, they have spectral properties very similar to cells. However, for some fluorochromes there can be small differences in spectral emissions compared to cells, resulting in spillover values that differ when compared to biological controls. It is strongly recommended that when using a reagent for the first time, users compare the spillover on cells and CompBead to ensure that BD Comp beads are appropriate for your specific cellular application.

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	(none)
563547	BUV395 Mouse IgG1, k Isotype Control	50 µg	X40
555399	APC Mouse Anti-Human CD14	100 Tests	M5E2
561708	APC Mouse Anti-Human CD14	25 Tests	M5E2
566349	Brilliant Stain Buffer	1000 Tests	(none)
566385	Brilliant Stain Buffer Plus	1000 Tests	(none)
563794	Brilliant Stain Buffer	100 Tests	(none)

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. BD Horizon Brilliant Ultraviolet 395 is covered by one or more of the following US patents: 8,158,444; 8,575,303; 8,354,239.
7. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
8. Please refer to <http://regdocs.bd.com> to access safety data sheets (SDS).
9. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.

References

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Schlossman SF, Stuart F, Schlossman .. et al., ed. *Leucocyte typing V : white cell differentiation antigens : proceedings of the fifth international workshop and conference held in Boston, USA, 3-7 November, 1993*. Oxford: Oxford University Press; 1995(Clone-specific)

Zola H. *Leucocyte and stromal cell molecules : the CD markers*. Hoboken, N.J.: Wiley-Liss; 2007(Biology)